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10/006,356	12/10/2001	Saied Bozorgui-Nesbat	RSB-2001(A)	1657

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07/29/2003

Robert S. Babayi
1600 N. Oak Street, Apt. 1632
Arlington, VA 22209

EXAMINER

ENG, GEORGE

ART UNIT

PAPER NUMBER

2643

DATE MAILED: 07/29/2003

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/006,356

Applicant(s)

BOZORGUI-NESBAT, SAIED

Examiner

George Eng

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 December 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-28 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Information Disclosure Statement

1. The information disclosure statement filed 7/26/2003 (paper no. 2) has been considered.

Double Patenting

2. A rejection based on double patenting of the "same invention" type finds its support in the language of 35 U.S.C. 101 which states that "whoever invents or discovers any new and useful process ... may obtain a patent therefor ..." (Emphasis added). Thus, the term "same invention," in this context, means an invention drawn to identical subject matter. See *Miller v. Eagle Mfg. Co.*, 151 U.S. 186 (1894); *In re Ockert*, 245 F.2d 467, 114 USPQ 330 (CCPA 1957); and *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970).

A statutory type (35 U.S.C. 101) double patenting rejection can be overcome by canceling or amending the conflicting claims so they are no longer coextensive in scope. The filing of a terminal disclaimer cannot overcome a double patenting rejection based upon 35 U.S.C. 101.

3. Claims 19, 22, 23 and 24 are provisionally rejected under 35 U.S.C. 101 as claiming the same invention as that of claims 14, 15, 16 and 17, respectively, of copending Application No. 09/811,588. This is a provisional double patenting rejection since the conflicting claims have not in fact been patented.

4. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground

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provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

5. Claims 1, 4-9 and 11-16 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1, 2-7 and 8-13 respectively, of copending Application No. 09/811,588. Although the conflicting claims are not identical, they are not patentably distinct from each other because all the claimed limitations, i.e., an array of keys and alphabetical system, and a signal generator are transparently found in the copending Application No. 10/006,356.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claim Rejections - 35 USC § 112

6. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

7. Claims 1-21 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter, which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. In this case, the specification fails to disclose to assign at least one letter of an alphabetical system based on the

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frequency occurrences of the at least one letter in a typical body of written, wherein the alphabetical system comprising at least one most frequently occurring letter that is entered by more than one activation of the same key and at least one less frequency occurring letter that is entered by activation of at least two different keys. As an example of letters "D" and "H", the letter "D" is one most frequency occurring letter comparing with the letter "H" according to the specification (figure 2), but the letter "H" is entered by more than one activation of the same key and the letter "D" is entered by activation of at least two different keys, i.e., key 5 and key 8, according to the specification (page 9, line 25 through page 10 line 14).

8. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

9. Claims 22-24 are rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential structural cooperative relationships of elements, such omission amounting to a gap between the necessary structural connections. See MPEP § 2172.01. The omitted structural cooperative relationships are: a technique of entering alphabetical letters using the keypad. It appears that the content of the claims merely define how to assign alphabetical letters into numbered key 1 through key 9, which does not explain how these alphabetical letters being entered by operating the keypad. Since the assignment is based on the entering technique as defined in the specification, the entering technique is essential structural cooperative relationships of the keypad. In addition, it is unclear how to enter English letters by operating the

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keypad because each numbered key 1 through key 9 has been assigned to two or more English letters.

Claim Rejections - 35 USC § 102

10. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

11. Claims 1, 4-6, 11-14, 16 and 19 are rejected under 35 U.S.C. 102(e) as being anticipated by Kitamura (US PAT. 6,231,252).

Regarding claim 1, Kitamura discloses a keypad as shown in figure 7 for entering letter comprising an array of keys with each key being assigned to at least one letter of an alphabetical system based on the frequency occurrence of the least one letter in a typical body of written work, wherein the alphabetical system comprises at least one most-frequently-occurring letter that is entered by one key activation associated with the same key, and at least one less-frequently-occurring letter that is entered by at least one key activation associated with each of at least two different keys (col. 9 line 30 through col. 10 line 65). Note while Kitamura also teaches the single key-pressing operation can be defined as an operation in which the same key is pressed twice (col. 6 lines 57-63). This is enough to met unduly broad claim.

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Regarding claim 4, Kitamura discloses one or more letters being assigned to each key in accordance with a position array having defined position elements (figures 1 and 7).

Regarding claim 5, Kitamura discloses the position elements include a central position and at least one peripheral position that point to an adjacent key (figure 11).

Regarding claim 6, Kitamura discloses a most-frequently-occurring letter being assigned to the central position (figure 1, 10), and a less-frequently-occurring letter being assigned to the peripheral position (figure 1, 20).

Regarding claim 11, the limitations of the claim are rejected as the same reasons set forth in claim 1.

Regarding claim 12, the limitations of the claim are rejected as the same reasons set forth in claim 6.

Regarding claim 13, Kitamura discloses at least one least-frequently-occurring letter being assigned in accordance with at least one element of the position array (figures 1,7 and 11).

Regarding claims 14 and 16, Kitamura discloses the array of keys comprising M rows and N columns and the number of letter in the alphabetical system equal to L, wherein M=4, N=3 and the keys that are not assigned to a letter, i.e., "*" key, is used for selecting an alphanumeric operation mode (figure 11, 501-512 and col. 15 lines 13-16).

Regarding claim 19, the limitations of the claim are rejected as the same reasons set forth in claim 1.

12. Claims 25-26 and 28 are rejected under 35 U.S.C. 102(b) as being anticipated by Terracina (US PAT. 4,008,793).

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Regarding claim 25, Terracina discloses a keypad for entering data symbols comprising an array of keys having at least one key assigned to a data symbol in accordance with a position array that has defined position elements (figures 3a-3b), including at least one peripheral position that point to a non-adjacent key, wherein at least one data symbol (i.e., Z or Q) is entered by key activation of a key and a non-adjacent key that is pointed by a peripheral position of a key (figure 4a and col. 1 lines 34-61).

Regarding claim 26, Terracina teaches the non-adjacent key being specified by a wrap around position of the array of keys such that a data symbol "z" is entered when key "A" and key "I" are pressed (figure 4a).

Regarding claim 28, Terracina teaches a key activation including touching of substantially the same or different locations of a surface (col. 1 lines 47-64).

Claim Rejections - 35 USC § 103

13. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

14. Claims 2-3, 17-18 and 20-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kitamura (US PAT. 6,231,252) in view of Lehtinen et al. (US PAT 6,518,957 hereinafter Lehtinen).

Regarding claims 2-3, Kitamura differs from the claimed invention in not specifically teaching that each key is a soft key presented to a user on a display device in accordance with a program executed on a device processor so that key activation requires at least one touching and at least one un-touching of a touch sensitive surface on the display. However, Lehtinen teaches a portable communication device including a touch sensitive screen (6, figure 2) for entering and displaying data so that key activation requires at least one touching and at least one un-touching of a touch sensitive surface on the touch sensitive screen in order to makes user friendly (col. 1 lines 18-67 and col. 2 line 27 through col. 3 line 10). Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify Kitamura in presenting each key as a soft key on the display device in accordance with the program executed on the device processor, as per teaching of Lehtinen, because it makes user friendly so that data is entered via the touch sensitive screen.

Regarding claims 17-18, the limitations of the claims are rejected as the same reasons set forth in claims 2-3.

Regarding claims 20-21, the limitations of the claims are rejected as the same reasons set forth in claims 2-3.

15. Claims 7-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kitamura (US PAT. 6,231,252) in view of Danish et al. (US PAT. 5,339,358 hereinafter Danish).

Regarding claims 7-8, Kitamura discloses a less-frequency-occurring letter being entered by a two-key sequence (col. 7 lines 9-10) and one or more non-letter symbols or characters being assigned to each key in accordance with position elements of the position array, wherein a non-

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letter symbol or character is entered by a two-key sequence (figure 11 and col. 15 lines 10-20). Kitamura differs from the claimed invention in not specifically teaching to enter two-key sequence requiring first activation the key assigned to the less-frequently-occurring letter or the non-letter symbol or character and then activating the key to which the position element of the less-frequently-occurring letter or the non-letter symbol or character points to. However, Danish teaches a rapid and visually simple method for entering character using a telephone keypad by entering two key sequence requiring first activation the key assigned to either the letter or non-letter symbol and then activating the key to which the position element of the letter or non-letter symbol point to (6 lines 9-48). Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify Kitamura in entering two-key sequence requiring first activation the key assigned to the less-frequently-occurring letter or the non-letter symbol or character and then activating the key to which the position element of the less-frequently-occurring letter or the non-letter symbol or character points to, as per teaching of Danish, because it makes user friendly by providing a rapid and visually simple method for entering character.

16. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kitamura (US PAT. 6,231,252) in view of Terracina (US PAT. 4,008,793).

Regarding claim 9, Kitamura differs from the claimed invention in not specifically teaching a wrap-around extension pointing to a non-adjacent key if a peripheral position points to no adjacent key. However, Terrachina a technique for inputting letter using a two adjacent keys and single key for forming most of the letters and numerals and two non-adjacent keys for

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forming the remainder of the letters and numerals if a peripheral position points to no adjacent key (figures 4a-4c). Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify Kitamura in pointing to a non-adjacent key if a peripheral position points to no adjacent key, as per teaching of Terrachina, in order to make the ease of use.

17. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kitamura (US PAT. 6,231,252) in view of Grover et al. (US PAT. 5,818,437 hereinafter Grove).

Kitamura differs from the claimed invention in not specifically teaching $M=N=3$. However, Grover discloses to use a 3x3 keypad, i.e., 9 data keys for entering English letter (figure 1, 103) in order to produce a highly efficient keyboard. Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify Kitamura in using 9 keys, i.e., 3 rows and 3 columns, for entering English letter, as per teaching of Grove, in order to produce a highly efficient keyboard.

18. Claims 22-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Grover et al. (US PAT. 5,818,437 hereinafter Grover).

Grover discloses a keypad (103, figure 1) for entering English letters comprising an array of nine keys numbered key 1 through key 9, wherein each key is assigned with one or more letter. Although the keys assignment of Grover is different from the claimed invention, it is old and well known in the art of rearranging keys assignment in the keypad depending upon a user's need. Therefore, it would have been obvious to a person of ordinary skill in the art at the time the

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invention was made to modify Grover in having same keys assignment as the claimed invention in order to make user friendly.

19. Claim 27 is rejected under 35 U.S.C. 103(a) as being unpatentable over Terracina (US PAT. 4,008,793) in view of Lehtinen et al. (US PAT 6,518,957 hereinafter Lehtinen).

Regarding claim 27, Terracina differs from the claimed invention in not specifically teaching that each key is a soft key presented to a user on a display device in accordance with a program executed on a device processor. However, Lehtinen teaches a portable communication device including a touch sensitive screen (6, figure 2) for entering and displaying data so that key activation requires at least one touching and at least one un-touching of a touch sensitive surface on the touch sensitive screen in order to makes user friendly (col. 1 lines 18-67 and col. 2 line 27 through col. 3 line 10). Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify Kitamura in presenting each key as a soft key on the display device in accordance with the program executed on the device processor, as per teaching of Lehtinen, because it makes user friendly so that data is entered via the touch sensitive screen.

Conclusion

20. Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington D.C. 20231

Or faxed to:

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(703) 872-9314 (for Technology Center 2600 only)

Hand delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, V.A., Sixth Floor (Receptionist).

21. Any inquiry concerning this communication or earlier communications from the examiner should be directed to George Eng whose telephone number is 703-308-9555. The examiner can normally be reached on Tuesday to Friday from 7:30 AM to 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Curtis A. Kuntz, can be reached on (703) 305-4870. The fax phone number for the organization where this application or proceeding is assigned is 703-308-6306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 306-0377.


George Eng

Examiner

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